

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2005

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603 000A - NATO Research and Development

PROJECT

6 01

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
691 NATO RSCH & DEVEL	2608	4600	4902	4994	5182	5275	5366	5460	0	42948

A. Mission Description and Budget Item Justification: This program implements the provisions of Title 10 U.S. Code, Section 2350a, Cooperative Research and Development (R&D) Projects: Allied Countries. The objective is to improve, through the application of emerging technologies, the conventional defense capabilities of the United States and our cooperative partners, including the North Atlantic Treaty Organization (NATO), U.S. major non-NATO allies and Friendly Foreign countries. Through technology sharing and joint equipment development these projects help reduce U.S. acquisition costs and leverage important technologies for the Army Transformation and the development of the Future Combat system. Cooperative efforts also improve multinational force compatibility with potential coalition partners through the development and use of similar equipment and improved interfaces. The program focuses specifically on international cooperative technology demonstration, validation, and interoperability of Army weapon and command, control, communications and information (C3I) systems. Projects are implemented through international agreements with foreign partners that define scope, cost and work sharing arrangements, management, contracting, security, data protection and third party transfers. Funds are used to pay for only the U.S. work share that occurs in the United States at U.S. Government and U.S. contractors' facilities.

Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	FY 2007
Multilateral Interoperability Program (MIP) (Partners: Germany, France, United Kingdom, Canada, Italy): Continued integration work from the Command and Control Systems Interoperability Program (C2SIP) into an Advanced Concept Technology Demonstration (ACTD) to achieve NATO levels four (messaging) and five (database) interoperability and also extend the effort into a sustainable program to incorporate lessons learned into national systems.	100	450	600	640
International Agreement Tracking System (IATS)/International Online (IO) Development and Implementation, NATO/International Cooperative R&D Policy Development, and Report to Congress Pursuant to 10 USC 2350a, prepare and provide to USD(A&T) the Army section of the Report to Congress on the International Cooperative Research and Development Program.	618	740	802	808
Low Level Air Defense Interoperability (LLAPI) (Partners: Major NATO Allies): The objective of this program is to successfully demonstrate Command and Control (C2) interoperability among the participant nations' Short Range Air Defense (SHORAD) assets for automated air picture exchange.	200	200	200	200
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP) (Partners: United Kingdom and Norway): STGP/SIGP is an OSD interoperability initiative. The STGP is a coalition (U.S./UK/NO) part of the SIGP which is key to the Future Combat System. STGP links directly with SIGP and FCS making the Army a key player.	100	460	500	506

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BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603 000A - NATO Research and Development			PROJECT 6 01	
Accomplishments/Planned Program B(continued)		FY 2004	FY 2005	FY 2006	FY 2007	
Combat Identification (Partners: UK, Germany, France and Italy): Combat ID will pursue the extension of tasks required for implementing the associated NATO Standardization Agreement (STANAG 4579), allied participation in Coalition Combat ID Advanced Concept Technology Demonstrator (ACTD), will pursue the NATO Staff Requirement and a STANAG for the Dismounted Soldier ID.		100	100	100	100	
Simulation and Command and Control (C2) Information System Connectivity Experimentation (SINCE) (Partner: Germany): Continues to define and demonstrate a generic solution for interfacing and networking Brigade/Battalion (BDE/BN) Command and Control Information Systems (C2IS) and applicable Modeling and Simulation (M&S) systems as required to support Coalition Force Collaborative Mission Management Experimentation.		400	400	0	0	
Senior National Representatives (Army) (SNR(A))/International Cooperative Opportunities (ICO) Projects (Partners: France, Germany, United Kingdom, Italy): Supports harmonization of programs at various levels; exchanging information, identifying knowledge gaps and conducting feasibility studies to further promote cooperative development; standardizing, fielding and roadmapping various processes; distributing the workload among the different nations. The Mine Protection for Armored Vehicles (MPAV) Working Group, specifically, will explore mine protection techniques and technologies in pursuit of advanced armor opportunities in mine protections, and other applicable cooperative R&D areas. Another ongoing program is Lightweight Soldier System Working Group which examines digitized soldier power-sharing during coalition operations. The study explores various requirements associated with standardization of soldier communications to define levels of interconnectivity and hardware solutions.		720	995	1100	1100	
Technology Research and Development Projects (TRDP) (Partners: United Kingdom, Germany, France, Canada, Australia, Netherlands, Korea, Norway): The scope of this MOU encompasses R&D collaboration on basic, exploratory and advanced Land Warfare Concepts and Technologies that are focused on Future Combat System enabling technologies, the maturation of which may lead to the development of technologically superior conventional weapon systems.		0	780	1000	1000	
Artillery Command and Control Interoperability (ASCA) (Partners: France, Germany, Italy, UK): The Participants in this program will develop an automated software interface between their national field artillery command and control systems. The nations will be able to receive and provide mutual fire support (i.e. cannon and rocket fire) in combined operations more rapidly and with minimal errors.		190	300	300	320	

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Accomplishments/Planned Program A(continued)

Joint Tactical Radio System (JTRS) (Partners: Japan, Sweden, UK): The participants in these programs will develop and implement Software-enabled radios as replacements to current radio systems. The projects shall be focused on maintaining interoperability as the countries pursue their own separate software radio programs. The project agreements (PAs) will include a joint development of software radio specifications, separate development and testing of software waveforms, and joint interoperability testing using the system assets developed as part of the agreements.

FY 2004	FY 2005	FY 2006	FY 2007
100	175	300	320
80	0	0	0
2608	4600	4902	4994

Small Business Innovative Research/Small Business Technology Transfer Programs

Totals

B. Program Change Summary

	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2005)	4801	4869	4949
Current Budget (FY 2006/2007 PB)	4600	4902	4994
Total Adjustments	-201	33	45
Net of Program/Database Changes			
Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years	-201	33	45

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)		February 2005
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603□□0A - NATO Research and Development	PROJECT 6□1
<p><u>C. Other Program Funding Summary:</u> None</p> <p><u>D. Acquisition Strategy:</u> All projects are test or technical demonstrations to feed into potential new requirements in support of Army Transformation to the Future Force or as product improvements to the Current Force.</p>		

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes					PE NUMBER AND TITLE 0603 000A - NATO Research and Development					PROJECT 6 1		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Multilateral Interoperability Program (MIP)	CPFF	C3S, CSC Fort Washington, PA	861	100	1Q	150	1Q	150	1Q	0	1261	0
b . International Agreement Tracking System (IATS) - Software Development	CPFF	JIL Information Systems Vienna, VA	1311	520	2Q	552	2Q	560	2Q	0	2943	0
c . Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone Ars, AL	437	115	1Q	115	1Q	115	1Q	0	782	0
d . Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	CECOM, Ft. Monmouth, VA	69	346	2Q	346	2Q	346	2Q	0	1107	0
e . Combat Identification	MIPR	CECOM, Ft. Monmouth, VA	787	25	1Q	25	1Q	25	1Q	0	862	0
f . Simulation & C2 Information System Connectivity Experimentation (SINCE) - C2 Systems	MIPR	CECOM, Ft. Monmouth, VA	1417	140	1Q	0	1Q	0		0	1557	0
g . Senior National Representatives (Army) (SNR[A])	TBD	TBD	2997	692	2Q	761	2Q	761	2Q	0	5211	0
h . TRDP	TBD	TBD	0	312	2Q	328	2Q	328	2Q	0	968	0

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes					PE NUMBER AND TITLE 0603 000A - NATO Research and Development					PROJECT 6 1		
I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
i . Artillery Command and Control Interoperability (ASCA)	MIPR	CECOM, Ft. Monmouth, NJ	344	208	1Q	208	1Q	208	1Q	0	968	0
j . Joint Tactical Radio System (JTRS)	MIPR	PM JTRS, Rosslyn, VA	50	100	1Q	150	1Q	150	1Q	0	450	0
Subtotal:			8273	2558		2635		2643		0	16109	0
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . MIP	MIPR	CECOM Ft. Monmouth, NJ	208	100	1Q	150	1Q	190	1Q	0	648	0
b . IATS	MIPR	RDECOM, Ft. Belvoir, VA	300	116	1Q	126	1Q	125	1Q	0	667	0
c . Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone Ars, AL	244	41	1Q	41	1Q	41	1Q	0	367	0
d . Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	CECOM, Ft. Monmouth, VA	15	77	1Q	77	1Q	83	1-3Q	0	252	0

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes					PE NUMBER AND TITLE 0603 000A - NATO Research and Development					PROJECT 601		
II. Support Cost (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
e . Combat Identification	MIPR	CECOM Ft. Monmouth, NJ	439	25	1Q	25	1Q	25	1Q	0	514	0
f . Simulation and C2 Information System Connectivity Experimentation (SINCE)	MIPR	CECOM Ft. Monmouth, NJ	384	100	1Q	0	1Q	0		0	484	0
g . SNR(A)	MIPR	TBD	642	154	1Q	169	1Q	169	1Q	0	1134	0
h . TRDP	MIPR	TBD	0	313	1Q	329	1Q	329	1Q	0	971	0
i . Artillery Command and Control Interoperability (ASCA)	MIPR	CECOM Ft. Monmouth, NJ	73	46	1Q	46	1Q	66	1Q	0	231	0
j . Joint Tactical Radio System (JTRS)	MIPR	PM JTRS, Rosslyn, VA	25	50	1Q	75	1Q	95	1Q	0	245	0
Subtotal:			2330	1022		1038		1123		0	5513	0

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes					PE NUMBER AND TITLE 0603 000A - NATO Research and Development					PROJECT 6 1		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . MIP	MIPR	CECOM Ft Monmouth, NJ	147	100	1Q	150	1Q	150	1Q	0	547	0
b . IATS	MIPR	RDECOM, Ft. Belvoir, VA	201	77	1Q	84	1Q	83	1Q	0	445	0
c . Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone Ars, AL	99	13	1Q	13	1Q	13	1Q	0	138	0
d . Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	AMSAA, Aberdeen Proving Ground, NJ	10	20	1Q	52	1Q	52	1Q	0	134	0
e . Combat Identification	MIPR	CECOM Ft Monmouth, NJ	419	25		25	1Q	25	1Q	0	494	0
f . Simulation and C2 Information System Connectivity Experimentation (SINCE)	MIPR	CECOM Ft Monmouth, NJ	291	100	1Q	0		0		0	391	0
g . SNR(A)	MIPR	TBD	405	103	1Q	113	1Q	113	1-2Q	0	734	0
h . TRDP	MIPR	TBD	0	0		0		0		0	0	0
i . ASCA	MIPR	CECOM Ft Monmouth, NJ	50	31	1Q	31	1Q	31	1Q	0	143	0
j . Joint Tactical Radio System (JTRS)	MIPR	CECOM Ft Monmouth, NJ	12	10	1Q	38	1Q	38	1Q	0	98	0

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BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes					PE NUMBER AND TITLE 0603 000A - NATO Research and Development					PROJECT 6 1		
III. Test and Evaluation (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
			1634	479		506		505		0	3124	0
Subtotal:												
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . MIP	MIPR	PEO C3S, Ft. Monmouth, NJ	86	100	1Q	150	1Q	150	1Q	0	486	0
b . IATS	MIPR	RDECOM, Ft. Belvoir, VA	98	37	1Q	41	1Q	41	1Q	0	217	0
c . Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone, Ars, AL	143	31	1Q	31	1Q	31	1Q	0	236	0
d . Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	CECOM, Ft. Monmouth, VA	5	17	1Q	25	1Q	25	1Q	0	72	0
e . Combat Identification	MIPR	CECOM, Ft. Monmouth, NJ	357	25	1Q	25	1Q	25	1Q	0	432	0
f . Simulation and C2 Information System Connectivity Experimentation (SINCE)	MIPR	CECOM, Ft. Monmouth, NJ	192	100	1Q	0	1Q	0	1Q	0	292	0

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes					PE NUMBER AND TITLE 0603 000A - NATO Research and Development					PROJECT 601		
IV. Management Services (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
g . SNR(A)	MIPR	TBD	217	46	1Q	56	1Q	56	1Q	0	375	0
h . TRDP	MIPR	TBD	0	155	1Q	342	1Q	342	1Q	0	839	0
i . Artillery Command and Control Interoperability (ASCA)	MIPR	CECOM, Ft. Monmouth, NJ	24	15	1Q	15	1Q	15	1Q	0	69	0
j . JTRS	MIPR	PM JTRS, Rosslyn, VA	12	15		38		38		0	103	0
Subtotal:			1134	541		723		723		0	3121	0
Project Total Cost:			13371	4600		4902		4994		0	27867	0